

CLAIMS

1. A planer comprising:
 - a shoe, the shoe defining an aperture;
 - a body mounted on the shoe; the body including a wall and the wall defining a recess;
 - a cutting drum rotatably mounted within the recess, the drum having a periphery and a portion of the periphery of the cutting drum projects through the aperture in the shoe;
 - a motor mounted within the body to rotatably drive the cutting drum;
 - a cutting blade mounted on the periphery of the drum and adapted for cutting a work piece when the drum is rotating, the cutting action of the blade causing debris created by the cutting to be ejected from the recess;
 - an airflow generator for producing an airflow within the body;
 - a conduit defined within the body for directing the airflow, the conduit connected to the recess for entraining and removing debris created by the cutting action of the blade;
 - a deflector connectable to the conduit for guiding the air flow and entrained debris from within the body to outside of the body, the deflector having an interior and exterior; and
 - wherein the conduit directs the airflow from the airflow generator, over the exterior of the deflector, then downward to the vicinity of the recess where debris is entrained by the airflow, and then to the deflector before it is guided by the deflector to outside of the body.
2. A planer as claimed in claim 1 wherein the deflector forms the lower wall of the conduit where the airflow passes over the deflector.
3. A planer as claimed in claim 1 and wherein the wall in the body defines an expulsion aperture and the conduit is connected to the recess by the expulsion aperture, and the cutting action of the blade causes debris created by the cutting to be ejected from the recess through the expulsion aperture and into the conduit substantially along a first direction, and the airflow in the conduit is directed within the body to a point below the expulsion aperture and then is directed to be blown across the aperture substantially along a second direction and the first direction of the debris and the second direction of the airflow intersect at an acute angle.
4. A planer as claimed in claim 3 and wherein the wall defining the expulsion aperture also defines a top to the expulsion aperture, said top located at a height above the shoe, and the planer body further defines a nozzle located within the conduit at substantially the same height

as the top of the expulsion aperture, and the conduit divides the airflow into a first part and a second part, the first part of the airflow passes the point below the expulsion aperture before flowing past the aperture, and the second part of the airflow passes through the nozzle and then exits the nozzle substantially in a third direction, and the third direction of nozzle airflow and the first direction of the debris intersect at an acute angle

5. A planer as claimed in claim 1, and wherein the body further defines an exhaust aperture in communication with the conduit, and the deflector includes an inner end and an outer end, and the deflector is insertable into the planer body at a downward slope from the outer end to the inner end in order to connect with the conduit.
6. A planer as claimed in claim 5, and further comprising a flap movable from a first position where the flap closes the exhaust aperture to a second position where the flap does not close the exhaust aperture.
7. A planer as claimed in claim 6, and wherein the exhaust aperture is a first exhaust aperture and the body defines a second exhaust aperture in communication with the conduit, and in the flap first position the flap closes the first exhaust aperture and in the flap second position the flap does not close the first exhaust aperture, and the flap is further movable to a third position wherein the flap closes the second exhaust aperture.
8. A planer as claimed in claim 6, and wherein when the deflector is not inserted in the body and the flap is in the first position, then the airflow and entrained debris exhaust through the second exhaust aperture.
9. A planer as claimed in claim 6, and wherein the flap is pivotally mounted within the body and is pivotable between the first position and the second position.
10. A planer as claimed in claim 9, wherein the axis of pivot extends in a vertical plane through the centre of the width of the body.
11. A planer as claimed in claim 9, and wherein the flap extends from the axis of pivot to the side of the planer.

12. A planer as claimed in claim 6, and wherein the flap is resiliently biased to the first position.
13. A planer as claimed in claim 12, and further comprising a spring, the spring biasing the flap to the first position..